5. Diya

Program Name: Diya.java Input File: diya.dat

Diya has decided to take on the challenge of producing the classic spiral matrix, a series of consecutive integers starting with 1 at the top left of the square, going across the top and down the right side, around and around until the square of the side length of the square is in the very center. He needs your help to write this program. You up to the challenge?

Input: Several integers N, each on a separate line, 2 <= N < 20.

Output: For each integer, output a spiral matrix as indicated above, and shown below. All column values must be left justified, with exactly one space following the largest value in the center of the output and all other columns consistently spaced with the column containing this value. Print a final "**=====**" line below each complete output.

Sample input:

```
3
6
10
```

Sample output:

```
1 2 3
8 9 4
7 6 5
=====
1  2  3  4  5  6
20 21 22 23 24 7
19 32 33 34 25 8
18 31 36 35 26 9
17 30 29 28 27 10
16 15 14 13 12 11
=====
1   2   3   4   5   6   7   8   9   10
36  37  38  39  40  41  42  43  44  11
35  64  65  66  67  68  69  70  45  12
34  63  84  85  86  87  88  71  46  13
33  62  83  96  97  98  89  72  47  14
32  61  82  95  100 99  90  73  48  15
31  60  81  94  93  92  91  74  49  16
30  59  80  79  78  77  76  75  50  17
29  58  57  56  55  54  53  52  51  18
28  27  26  25  24  23  22  21  20  19
=====
```